L. T. HOBHOUSE
MEMORIAL TRUST LECTURES
No. 2

THE ABSURDITY OF ANY MIND-BODY RELATION

by

CHARLES S. MYERS
C.B.E., F.R.S., M.A., M.D., Sc.D. (Camb.)
Hon. D.Sc. (Manch.)

FORMERLY FELLOW OF GONVILLE AND CAIUS COLLEGE
CAMBRIDGE

Delivered on 19 MAY 1932
at University College
London

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ABSTRACT OF LECTURE

All that we can surmise about the ultimate nature of lifeless matter is that it is mechanically active. The essence of matter consists in process, not in substance; its *esse* is not *percipi*, but *agere*: its qualities and properties are known to us only by our conscious experience of them—that is to say, by the interaction of *its* own mechanical activities with *our* own self-activity. We are bound to admit the existence of mechanical (and other) activities, independent of our own self-activity.

Living matter is characterized by an inherent activity totally different from that alone inherent in lifeless matter—an activity not blindly mechanical nor involving the expenditure of mechanical energy, viz. directive activity. The system of the whole universe also exhibits, in its history and organization, a diffuse directive activity; but in the living organism directive activity is inherent within the system of the individual, manifesting itself, e.g. in the individual's struggle for existence. With the specialization of functions and differentiation of tissues which occur in the evolution of animal life, this directive activity, persistent throughout every tissue, becomes most highly developed in the nervous system. The various higher and lower directive activities within a living organism are never in perfect harmony; further, they are controlled by, as they themselves guide, purely mechanical activities.

Throughout life, directive activity, together with the associated, characteristic, mechanical activities, is

synonymous with mental activity. The activities of what we artificially separate as living matter and mind are identical, each comprising the same directive and peculiar mechanical activities. There can be no mind-body *relation* in the presence of this *identity*. The only distinction that can be drawn is one between the living individual and individual objects of the lifeless universe.

The highest directive activity in the living organism is that of the 'self', which becomes less uniformly diffuse and more pontifical, as, with the evolution of the nervous system, directive activity becomes more and more highly distilled and sublimated in the evolving self. All conscious mental activity is self-activity; only the self is conscious—conscious, at first, solely of self-activity (conation) and of modifications of that self-activity (affects). Conation gives us experience of directive activity. Affects become differentiated into conscious feelings and into conscious sensations, perceptions, ideas, &c., the latter being due to differentiation of, and interactions between, the highest and lower levels of mental activity.

THE ABSURDITY OF ANY MIND-BODY RELATION

WE are here to-day to pay homage to the genius of perhaps the ablest of modern pioneers in the combined fields of philosophy, sociology, and psychology—the late Leonard Trelawny Hobhouse. Our commemoration takes the form of an address which I have been invited this year to deliver. Although deeply sensible of the honour which has thus been bestowed on me, I am equally sensible of my unworthiness to fulfil the duties of the occasion. For research in psychology became only for a brief period of his active life Hobhouse's main interest. During that short time he carried out experiments at Manchester in comparative psychology on monkeys, cats and dogs, a young elephant, and an otter—experiments which were in many respects vastly superior to those of his predecessors, showing greater insight, making use of improved methods and new tests, and reaching results the value of which is becoming increasingly recognized and utilized to-day by his successors in this important field of investigation. But although throughout most of Hobhouse's varied life philosophy, sociology, and politics were his prime concern, his interests in mental functions, mental development, and in such problems as the relations of mind, life, and matter, clearly and necessarily continued undiminished. Indeed, shortly before his death, in 1929, Hobhouse contributed an article on Comparative Psychology to the fourteenth edition of the *Encyclopaedia Britannica*; and only eight years earlier he had published the third edition of his *Mind in Evolution*, which, first issued in 1901, contained an account of his experiments in comparative psychology and his views on the growth of mind in animals and on its stages of transition to the human mind. Throughout his teaching career he took constant care to instruct his social science students in psychology and biology; and, as Professor Ginsburg has so lucidly shown in his admirable account of his teacher's and predecessor's work,[1] his reflections and research in these sciences manifestly influenced him throughout the development of the views which he came to hold in ethical and social philosophy and in theories of reality and of knowledge.

For my address to-day I have chosen a subject—the relation between Mind and Body—which, I know, would have interested Hobhouse. I cannot, of course, say exactly how far his views would have coincided with those which I am going to put before you. But of a large measure of his agreement and sympathy I feel assured. For on more than one occasion, when my own views were less formed than they are to-day, I had the opportunity of discussing the subject with him; and I have found passages (cited later) in his published works which likewise indicate at least a close approach to several of the conclusions to which independent reflection has brought me.

The conclusion which I have at length reached is that the notion of any *relation* between mind and body is absurd—because mental activity and living bodily activity are *identical*. The most highly specialized forms of these two activities are, respectively, conscious processes and the processes of living brain matter. At first sight, they appear so different from one another as to make it seem absurd to assert their identity, and hence absurd to deny the possibility of any relation between them. But I shall hope to show the untenability of this *primâ facie* view. I shall also give reasons for the view that the mechanical principles, with which the natural sciences have so far been solely concerned, are only an abstraction from the *quasi*-dual set of principles—direction and mechanism—that govern the activities not only of living organisms but also of lifeless matter and of the entire universe. Direction, involving order, purpose, and end, is no more confined to mind than is blind mechanism to living or lifeless matter. Both are universally widespread. Each is an abstraction from the whole activity —an abstraction totally different from the other. For direction (as abstracted) involves none of the physical attributes of mechanical energy, &c., which we utilize in the physiological, physical, and mathematical sciences; and abstract mechanism knows nothing of direction. Direction is inherent in the system of the living individual organism. In regard to the dead and lifeless world, it seems to be inherent only in some far more widely organized system.

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[1] *L. T. Hobhouse: His Life and Work.* By J. A. Hobson and Morris Ginsberg. London: G. Allen & Unwin. 1931.

The notions both of direction and mechanism are, I submit, derived from conscious mental experience, the former especially from our own individual *personal* activities, the latter especially from our common environment, the *public* world in which we live and act: in other words, we realize direction best in mind and mechanism best in external matter. But mental activity involves and is controlled by mechanical activity, just as mechanical activity is guided by directive activity. All that we know of conscious mind or spirit is derived from that supreme mental activity which we term *self*-activity; its directive aspect is expressed in striving, conation, impulse, and will, i.e. in ‘acts’, or processes, of consciousness; its mechanical aspect is expressed in many of the inter-relations of sensations, percepts, ideas, i.e. of the ‘contents’, or products, of consciousness.[1] All that we know of matter is derived from the interaction of its own purely mechanical activity with our own self-activity. In reality, there is neither spirit in mind nor substance in matter; they are the creations of the self's activity and of its naïve experience. My conclusion is that we know nothing of the so-called properties of matter in themselves. We must assume that matter is ‘something’ *active*; but the forms or results of that activity—the notions of energy, mass, weight, resistance, size, position, movement, like those of colour, sound, taste, and smell, with which we endow matter—are ‘psychomorphic’. They are the result of the interaction of the activities of the external universe with the directive activity of our own living individual selves. The former we commonly call matter, the latter conscious mind or spirit. Further, there is nothing, I maintain, distinctive between conscious mind and certain collocations of *living* matter. Conscious mind is essentially a specialization, a distillation of that directive activity, inherent in certain mechanical activities, that distinguishes living from lifeless matter. The characteristics of mind and life, in general, are identical. There can,

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[1] The place of feelings will be conveniently discussed later.

I shall argue, be no possible *relation* between mind and living body. Mind and life are identical properties of what we term living matter—a peculiar form of activity, differing from that of lifeless matter, in the inherent purposive, self-directive, and finally purpose-felt struggle for existence.

If this is so, the hypothesis of psycho-physical parallelism falls to the ground. According to it, there exist side by side two activities, the one psychological or spiritual, the other physiological or material, the one knowing nothing of and being uninfluenced by the other. Strictly speaking, the hypothesis should be termed 'psycho-physiological', rather than psycho-physical, parallelism. For it implies either an impassable dualism between mind and *living* nervous substance, or the superposition of one concomitant over the other. Its only attempt to escape such dualism or reciprocal epiphenomenalism, thus established between consciousness and brain substance, is by supposing that the psychological and physiological activities are comparable, say, to the opposite convex and concave surfaces of a mirror—two inevitably present surfaces of some inherently unknowable *tertium quid.*

Equally impossible becomes the hypothesis of interactionism, which frankly posits an even wider gulf between mind and living matter, each of which is assumed to follow its own laws and to be able to act on the other, just as an operative and his machine might at one time interact, now in co-operation, now in antagonism, and at yet another time act in independence of one another. Give a person a sufficient dose of alcohol, and his intoxicated brain-substance acts on his independently active mind, causing him to show all the mental signs of alcoholism. Cause a person to be emotionally excited, and his mental processes act on the independently active living substance of his adrenal glands, liberating adrenalin and hence finally pouring sugar into the blood-stream.

As I have already said, I maintain that such dualism, such separation of, and antagonism between, living body and mind, is unfounded. The only distinction that we are justified in drawing is between the living organism and the lifeless universe. In the latter directive activity is inherent only in the universe: in the former it is also inherent in the individual.

Equally absurd is the monistic view which would express both mind and mechanism solely in mental or solely in mechanical terms—the spiritualistic hypothesis declaring that all material phenomena are of mental nature, the materialistic hypothesis retorting that all mental phenomena are of material nature. For the spiritualist all matter, every activity of matter, including living matter and, for example, living brain-matter, has no existence but for the mind that perceives it. Its *esse* is *percipi.* Without consciousness, not only would there be no colour, smell, or taste in matter, not only no extension, hardness, shape, energy, &c., in matter, but matter, even brain matter, would cease to exist.

Such solipsism is surely as absurd as it is to suppose, at the other extreme, that the properties of matter are wholly independent of the mind to which they are revealed, that colour, sound, touch, or size are the same in the mind of the humblest of living organisms as in the mind of the most advanced. We may freely admit that the properties of matter depend not merely on the material stimulus presented to the living organism, but also on the effects of that stimulus in relation to the present and past activities of the living organism. We may freely admit that apart from our own activity we can conceive nothing as to the nature of that stimulus. But we are surely not justified in affirming that were it not for our mental activity that stimulus would cease to exist. Such idealism is unwarrantable. All that we can say is that without mind we cannot *interpret* the activities of matter. Our common sense, however, forbids us to deny the continual existence of material activity, independent of our own mental activity. Its *esse* is not *percipi*, but *agere*. Each of us is bound to posit activities other than his own. And the very conception of such activities is impossible without positing time and space. True, our conception of all activity is compelled to be 'psycho-morphic'; so is that of time and space, and likewise that of purpose and direction—when they lie (or when we suppose these to lie) beyond our personal experience of them. We are forced to think in terms of our individual human, mental experience. We can only proceed by abstractions from our total experience. And just as the physiologists and the physicists have concerned themselves with pure mechanisms by ruling out all purpose and direction, so further by ruling out mechanisms recent mathematicians have reduced the universe to abstract symbols and equations relative to a space-time continuum.

But neither physical mechanisms nor mathematical equations present a complete picture of the history and the conduct of the living and lifeless world. They are powerless to account for its past evolution or to predict its future evolution. All that they can state is that, given such and such factors, such and such effects have resulted and must result. But they cannot foresee what factors will present themselves, nor what role direction will play; and admittedly the course of nature is uni-directional and irreversible. Otherwise we must suppose that the evolution of the living and lifeless world is merely the outcome of blind mechanism —that it consists merely of chance shots fired hither and thither, with the persistence of those which happen to succeed by accidentally 'hitting the target' of adaptation to environment. Otherwise, too, we must accept as wholly satisfactory the physical conception of entropy—that the total energy of the universe is everlastingly being transformed from higher to lower forms, and that its essential characters are those of a wound-up mechanism which is gradually unwinding; with this view the broad conception of evolution disappears.

But however true be such mechanical conceptions from the standpoint of physical science, they cannot be held sufficient when we take into account our equally certain experience of direction and purpose—our experience of the anabolic and morphological creation of ever higher and more complex substances and forms, or of the psychological creation of new ideas and discoveries which are characteristic, respectively, of the evolution of life and of mind. Chance variations in the germ plasm seem as inadequate an explanation of the evolution of species as chance combinations of mental activities are of the creation of masterpieces of sculpture, painting, or music. Blind mechanisms stand revealed in the products both of heredity and of mind; but alone they are inadequate to explain actual history. Many mathematicians and physicists to-day are dissatisfied with the sufficiency of the old views of entropy, conservation of energy, determinism, absence of guidance, and the like. But I suggest that their efforts to introduce other conceptions are likely to fail because their new conceptions rest essentially on the same bases as the older. So, too, even if we find little adequate warrant on experimental grounds for assuming the direct inheritance of acquired characters in order to account, say, for the marvellously complex instincts of certain insects, may we not assume some unknown *non*-mechanical relation between the origins of such behaviour and the corresponding modifications in the germ plasm—perhaps some common factor of purposeful direction, not amenable to experimentation, which is responsible for both?

Both mind and life are clearly more than blind mechanism. Directive activity is inherent in each living organism. May it not also be inherent (in some unknowable form) in larger non-living organic units, of which the largest is the universe conceived as a whole? If this be so, are not the physical concepts of mechanism merely an abstraction from the whole, adequate for the scientific, but incomplete for a total, description of nature?

The conclusions to which I have thus come are closely similar to Hobhouse's own views. He, too, was impressed with the fact that other orders of experience had just as much claim to be considered as that particular aspect of reality which is envisaged by the physical sciences. He, too, insisted that the interweaving of the teleological element of mind with the mechanical element of the physical and organic constituted 'the fundamental characteristic of reality'.[1] He, too, refused, on the other hand, to reduce all reality to the spiritual. 'When everything is spiritual', as he wisely expressed this refusal, 'the spiritual loses all distinctive significance.' He regarded neither matter nor mind as stuff or substance. Neither of them, therefore, can be regarded as a mutually interacting substance nor as a substance of which the other is a quality, but (as Professor Ginsberg says in his account of Hobhouse's views) 'both qualify the total reality, which may include also other elements which as yet elude our observation and powers of inference'.[2] Nor could Hobhouse accept the modern mathematical attempts to abandon some of the fundamental hitherto accepted principles of mechanism. In a letter written to Professor Ginsberg he said: 'I cannot think that mechanism counts for so little as its recent exponents are telling us.'[3]

Mass and energy have now become interchangeable terms for the mathematical physicist. A material particle is regarded by him as but a very condensed and localized quantity—an organized, finely grained centre of energy or activity. Sometimes the physicist explains material phenomena in terms of a corpuscular, sometimes he finds it easier to explain them in terms of an undulatory hypothesis. In either case, stuff and substance are not the physicist's ultimate realities; the true nature of things is to be found in process—in happenings, events, or acts in a space-time continuum. Why then, we may well ask, is it necessary to separate conscious activity and cerebral activity? Surely not—in face of this conclusion—because of the apparently wide difference between consciousness and living brain-matter, but merely because the former is only known to us individually and personally, whereas the behaviour (i.e. the activity) of the latter consists of public properties amenable to scientific treatment and partly common to the properties of non-living matter. Indeed, the *primâ facie* difference between all mind and protoplasm, between 'spirit' and living 'matter', disappears as soon as we deny substance to either and conceive each as consisting in mere activity.

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[1] *Contemporary British Philosophy*, edited by J. H. Muirhead, p. 177.

[2] Op. cit., p. 238.

[3] Ibid., p. 255, footnote.

But although both mind and living matter and lifeless matter consist merely in activity, what I am here endeavouring to urge is (*a*) that living matter differs from dead and lifeless matter not merely in certain differences of mechanical activity, but owing to the possession by the living individual of directive activities inherent in the organism, whereas in the lifeless world directive activity is external to matter; and (*b*) that the common characteristics of all matter (substance, colour, &c.) depend on individual conscious experience due to the interaction between the mechanical activities of matter and the directive activities of living nervous matter.

Once again I find myself in close agreement with Hobhouse's standpoint. For Hobhouse believed that what he termed a 'Central Mind', which courses through the universe, must have operated long before life and individual minds made their appearance and is responsible for the order, direction, and wholeness of the universe. Life, according to Hobhouse, arose not from dead elements, but from pre-material elements which also gave rise to inanimate matter. For him, therefore, all life contains a germ of mind.

Mind is thus to be regarded as the expression of the directive activity of living matter; and as living substance becomes specialized in function and differentiated into tissues and organs, this directive activity of life and mind becomes sublimated, particularly within the nervous system, in the form of a conscious 'self'. The self is the highest and the most highly integrated form of living and mental directive activity; and only the self is conscious. There are other forms of directive activity in the nervous system; some of these unconscious forms *may* become conscious, when self-activity is involved. (But so long as they are unconscious, we are powerless to describe them in terms of consciousness.) There are yet other forms of directive activity, both in the nervous and in other systems differentiated within the higher animal organisms, which *never* become conscious. Just as what is commonly called the total 'life' of such an organism consists both of the 'lives' of its several parts and of the 'life' of the unitary 'individual', which is more than the sum of the life of its several parts—so the total directive activity of such an organism consists not only of the directive activity of its several parts, but also of that unitary directive activity of the self which is more than the sum of the directive activities of the several parts of the 'individual' organism. Thus the directive activity of the self is to be regarded as the highest unitary activity of the nervous system. The lower directive activities may not always be in harmony with the highest; there may be mental conflicts, conscious as well as unconscious, as we all know well.

Just as the universe consists neither solely of mind nor solely of matter, just as neither spiritualism alone nor materialism alone is capable of embracing the total reality, so in regard to directive activity there is, it seems to me, no true monism and no true dualism in its relation to mechanism. This view I find admirably expressed by Hobhouse in a letter written by him to Miss M. L. Davies, and published in Hobson and Ginsberg's account of his life and work. He wrote: 'The world is neither mechanism nor spirit, but a spiritual struggle for wholeness or harmony in discordant parts, and the struggle makes evolution because it has a drive behind it which the inert mechanical parts have not.'[1] This drive, as Hobhouse points out, is essentially conative in character, progressing (to use Ginsberg's and his own words) 'from its earliest manifestations in the gropings of unconscious effort to the clearness of articulate purpose, and that the development of not "a side product of natural selection but the central fact in the history of life upon earth".'[2]

Throughout the universe, then, there are parts or elements which are 'indifferent' to one another—parts which are self-determining—as well as a single unifying and harmonizing principle which 'runs through all things'. Yet this principle, as Hobhouse rightly insists, not only 'conditions all elements, but it is also conditioned by them';[3] the latter are as necessary for the former as the former is for the latter. Conflict and antagonism, as well as a higher organizing unity and harmony, are inherent in the world order. We have, therefore, to admit the antinomy of higher and lower directive activities, and also that of directive and mechanical activities. Mechanisms, too, are necessarily encountered in the activities, even of the highest, conscious levels of life. They play their part not only at lower levels, e.g. in tropisms, but also at higher levels, e.g. in the acquisition and display of associations and of skill. Mechanisms may be ‘ rung ’, as it were, or ‘ controlled ’ by the play of directive activity. But it is only by the directive activity of the self that we can ever become conscious of them. And it is only in terms of that activity that we can ever fully express the differences between living and dead matter.

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[1] Op. cit., p. 259.

[2] Ibid., p. 122.

[3] *Development and Purpose.* London: Macmillan & Co., Ltd. New edition, 1927, p. 451.

The molecular arrangements of living protoplasm are sustained and controlled by its directive activity. They are mechanically active, whereas the directive activity involves no consumption of energy; when it ceases, life ceases, and therewith living protoplasm changes in its molecular arrangements, and hence in its activities, to those of dead matter. It is only for scientific purposes that mechanical and directive activities are separable in living matter; in reality they form an interdependent whole, perpetually acting with and reacting on one another. There is no question of vital forces *replacing* mechanical forces during the lifetime of an organism. Guidance does not mean any addition to, or subtraction from, the total mechanical energy of the living system. We might compare the purposive, orderly working of a living organism to the intimate co-operation of a chauffeur with his car, which, moving in his absence, first runs riot and finally becomes inert. But such a dualistic comparison overlooks the inseparable connexion between direction and mechanism which is inherent in living matter.

Why then, I ask again, should we separate mental activity and cerebral activity, seeing that the two are identical, all consciousness being the expression of the highest form of directive activity of the living organism, all life involving directive activity, and all matter being known to us only as the interaction between other non-directive, mechanical activities outside our individual selves and the activities of individual living organisms? Whereas the interactionists and the parallelists assume a clear distinction between living substance and conscious mind, I, on the contrary, am attempting to show that conscious mind *is* living substance in our immediate personal experience, and that all substance, whether living or lifeless, merely becomes revealed to us as the interaction of (*a*) the highest 'levels' of the directive activity of our own living substance (i.e. of our conscious or self-activity) with (*b*) the activities that lie in lower 'levels' (cf. pp. 23, 24) or outside us. The spiritualists and materialists equally err, I maintain, in neglecting one or other of these two forms of activity, the former in denying the existence of activities other than those of our individual selves, the latter in denying the existence of activities other than those of lifeless matter.

But it may be argued that self-activity can only express itself in terms of striving, directing, and aiming, whereas conscious experience consists not only in such conative activities of the self, not only (*a*) in *acts* and *processes* of the self, but also (*b*) in *modifications of* the self—what we term affects—and (*c*) in *presentations to* the self—what we term sensations, percepts, and ideas, i.e. the cognitive contents of consciousness. In order to solve this difficulty, let us consider a possible explanation of the relations and origins of these three modes or forms of consciousness.

Inherent directive activity must have been of a very low order at the first appearance of the most primitive forms of life. It has remained low in plants, where indeed we can barely envisage mind at all. But with the evolution of locomotion, with the consequent ability of the organism to select its environment, and with the development and choice of alternative reactions by the whole organism to its environment, directive activity became of increasing importance in relation to mechanical activity. Even in the amoeba and in other protozoa, as has been proved by the well-known observations of Jennings, the purely mechanical play of tropisms and the like cannot afford an adequate explanation of the behaviour of these organisms. Throughout every form of life, the mechanical activities are controlled by the directive. As the nervous system develops, it assumes more and more, but never completely, such control. And as higher and higher levels of the nervous system develop, such control is largely ‘distilled’, as it were, from the lower to the higher nervous levels, where it becomes more and more refined and concentrated. Thus in such a highly differentiated organism the lowest nervous levels, fulfilling the functions of what we term ‘reflex’ activity, have had practically all their directive activity removed from them. But reflex action cannot be regarded as primitive: its appearance is not early but quite late;

and its almost purely mechanical nature is due to the specialization of the directive activity inherent throughout the nervous system into higher and higher levels of that system. Evidence of the same process of distillation is afforded by the results of brain injuries in the higher organisms; the higher the animal, the more profound are the effects of a lesion in the highest levels of the central nervous system, and the less independent or separately viable are the directive activities of its several parts.

The emergence of new biological and psychological forms, functions, and levels rarely occurs merely by the addition of new increments, but rather by higher specialization in and distillation from lower, earlier, and undifferentiated forms, functions, and levels. Thus intelligence, I believe, is not, as Rivers and others have maintained, to be regarded as something suddenly superadded, at a certain stage of evolution, to instinct. Intelligence and instinct are to be regarded as one primordial whole, and as having been differently developed in the evolution of different forms of animal life. Instinct is never so nearly mechanical as the reflex; it always involves some directive activity, being generally modifiable by experience and according to the environment.

In no form of life is directive activity wholly absent. I regard mental activity as identical with the directive activity (combined with the peculiar mechanical activity) of any organism, and hence as omnipresent in every living individual. And I regard *conscious* mental activity as identical with the supreme directive activity of an organism, the directive activity of its organized 'self'. Self-activity, I repeat, is conscious activity.

We can no more fix the earliest appearance of a recognizable self in organic evolution than we can fix the earliest appearance of conscious activity. Indeed, the recent study of viruses is apparently making it difficult to draw a definite line even between the behaviour of living and non-living matter.

With the development of self-activity, the lower levels of directive activity do not wholly cease. They are hardly recognizable in reflex levels, but (as I have insisted elsewhere) they persist in other and in intermediate or relatively independent 'levels' or spheres of mental activity. 'The inspiration of genius and the intuitive judgements and decisions, which, crude though they may be before submission to the self's judgement, arise apparently from the "depths" of the mind with impulsive force and compelling conviction afford striking examples of this fact. The well-known improvements in learning which continue after we have ceased to practise, so that it has been said of us that we learn to skate in summer and to swim in winter, are further examples of such activity—whether or not we choose to ascribe such improvement to the gradual disappearance of adverse initial inhibitions or to the direct strengthening (" consolidation ") of acquired integrations (or associations). Further, the self is continually being played upon by the impulsive and by the perseverating forces of lower mental systems. They struggle, not less than the self, for their own existence and for their own lower " self "-ish ends. Where they are modified by inhibition (or repression), it is only to ensure general harmony and general compatibility. Inhibition is not to be viewed as a mere act of passive drainage of mechanical energy from one mental constellation to another', but as the consequence of a more highly organized directive activity 'against which the inhibited constellation ever tends to rebel in its endeavour to gain somehow or another liberty of action, in some lower degree purposeful and directive. . . . The self is the highest controlling and directing power. The orders which it consciously gives, and the efforts which it consciously makes, may, once started, continue to be carried on unconsciously, i.e. without the conscious participation of the self. Thus we may consciously but vainly try to recall some past experience or to solve some difficult problem; and after giving up the effort, this directive activity may still persist unconsciously until suddenly the forgotten object, or the abandoned solution, suddenly flashes full-born and unbidden into the self's consciousness. So, too, we may go to sleep determined to wake up at a given hour, or we may accept, in the hypnotic state, a decision to carry out some prescribed act on the lapse of a prescribed period of time after emerging from that state; and at the ordained moment the sleeper wakes, or an uncontrollable impulse is felt to perform the suggested act.'[1]

Our lower nervous levels are *mentally* active, although *consciousness* is the mental activity of that highest, unitary, pontifical system which we may call the self. I regard our sensations, our percepts, and our ideas as the unconscious directive (and mechanical) acts of certain relatively lower mental (sensorial, &c.) ‘levels’. And I suggest that it is only when these lower-level *acts* are accompanied and received by the self-activity of the highest nervous ‘level’ that they become conscious *presentations* to the self. Thus there arise two forms of consciousness—one the directive, purposeful, evaluating, activities of the self, expressed as the conscious, ‘conative’ *acts* of apprehending, recalling, deciding, inferring, &c., and the other the conscious, ‘cognitive’ *products* of sensation, perception, memory, decision, inference, &c., what is sensed, perceived, remembered, thought, &c. Both depend on self-activity—conative experience being its direct expression, cognitive experience being the result of its interaction with certain lower forms of nervous activity.

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[1] Quoted from my presidential address to Section J (Psychology), 'On the Nature of Mind', delivered at the Centenary Meeting of the British Association for the Advancement of Science, London, 1931.

But this differentiation of the conative and cognitive forms of consciousness must have been preceded by, and indeed dependent on, the prior differentiation of self-activity into ‘acts’ of the self and ‘modifications’ of the ‘acts’ of the self. These modifications arose both from internal happenings within the organism and from external happenings in its environment. Both kinds of modification of the acts of the self were experienced primitively as *affects*. All sensations were originally affects of self-activity. It was only with the subsequent differentiation of higher and lower levels and thus of higher, more unitary, less diffused guidance and control, that some of these affects became cognitively objectified as *contents* of consciousness or conscious *presentations to* the self, whereas others, dependent on the persistence of primitive (e.g. thalamic) activity, continued as mere *feelings of* the self.

The ability of the self to appreciate modifications of the self rests on the ability of all directive activity both to register and to revive its own previous activity. Without such ability, purpose and direction throughout the universe would be inconceivable. There is thus a continuity in the life of the self which enables it not only to be consciously active but also to be conscious of a self and to appreciate modifications in such self. It can revive bygone experiences of acts of the self. It may even suffer such temporary dissociation as to enable it to view (as in some cases of multiple personality) the acts of some other self.

Thus whether our conscious experience is conative, cognitive, or affective, whether it concerns the 'why', the 'what', or the 'how' of conscious life, it is identifiable with self-activity—the highest unitary integration of the directive activity of the organism. Where, as in plants, locomotion and plasticity are minimal, there, I repeat, we find self-activity and consciousness to be inappreciable. But throughout vegetable and animal life, directive activity is characteristically inherent, and it is identical with mental activity—unconscious in the absence of adequate self-activity.

There can be no definite locus for this self-activity. Although I have spoken of it as the most highly distilled or sublimated essence of the various directive activities of the living body, as the highest pontifical system of the mental activities within the individual organism, the self is not to be regarded as localized merely aloft within a narrow sphere of the living matter of the brain. It is only the lower directive activities—those of the relatively simple movements and those affording relatively simple sensory experience—

to which a fairly circumscribed cerebral localization can be imputed in vertebrates. All our evidence points to a far wider spread of the directive activities which concern more complex and, in particular, acquired skills, and likewise percepts and ideas. Self-activity signifies but the unitary co-ordination of these various directive sub-activities—a supreme divinity harmonizing and integrating the acts of numerous lesser divinities—and about as widely spread spatially as a supreme divinity may be held to be. Directive activity of the highest kind relates to the whole organism; it is well nigh as widely spread as the many directive activities which, more or less immediately, it guides and controls. These, together with other, non-controllable, directive activities, all of which may be broadly described as mental, are spatially identical with the dimensions of the living body.

There is therefore, I conclude, no *relation* to be sought between mind and living body. Dead matter is but blindly mechanical activity, and living matter is but a unique combination of certain unique mechanical activities with non-mechanical directive activities. There is no separable mental or vital force; and the mental must be regarded as identical with the vital. The only distinction that remains is between the living or the mental, on the one hand, and the lifeless or the non-mental on the other hand, in which no directive activity is present, no struggle for existence, no individuality, and hence no life or mind. But directive activity is not confined to the living organism, any more than mechanical activity is confined to the physical universe. There are types of blind mechanism in the morphology of species and genera and in living or mental processes, just as there are in the configuration and movements of atoms, molecules, and stars. Direction and purpose which employ these types are, however different, similarly universal. But whereas in the living universe they are largely inherent in the individual, in the lifeless universe they are only external—responsible for the history, order, and evolution ultimately of both universes.

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